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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,718	08/17/2001	Steve R. Jahnke	TI-30253	6240
23494	7590	01/29/2004	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			HUYNH, KIM T	
			ART UNIT	PAPER NUMBER
			2112	3

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/932,718	JAHNKE ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Kim T. Huynh	2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 17 August 2001.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-6 is/are rejected.

7) Claim(s) 7 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 17 August 2001 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ .

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_ .

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_ .

## DETAILED ACTION

### ***Priority***

1. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

The certified has been filed in parent Application No. 60/231,484, filed on 09/08/2000.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 4-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Smith (US Patent 6,629,178)

As per claim 1, Smith discloses a data transfer system comprising:

- a plurality of first bus devices, at least one first bus device being a first bus data supplying device capable of supplying data, at least one first bus device being a first bus data receiving device capable of receiving data and at least one first bus device being a first bus master device capable of requesting and controlling data transfer; (col.5, lines 35-47), fig.2, 250N(first bus devices)
- a first data bus connected to each of said plurality of first bus devices and capable of transferring data from a first bus data supplying device to a first

bus data receiving device under control of a first bus master device;

(col.5, lines 35-47)

- a plurality of second bus devices, at least one second bus device being a second bus data supplying device capable of supplying data, at least one second bus device being a second bus data receiving device capable of receiving data, a plurality of second bus devices each being a second bus master device capable of requesting and controlling data transfer, a predetermined one of said plurality of second bus devices being a dominant second bus master device; (fig.2, 250H(second bus devices),  
(col.2, lines 13-16, wherein designated high-priority latency sensitive implies dominant), (col.5, lines 52-61)
- a second data bus connected to each of said plurality of second bus devices and capable of transferring data from a second bus data supplying device to a second bus data receiving device under control of a second bus master device; (col.5, lines 52-61)
- a bus bridge connected to said first data bus and said second data bus, said bus bridge capable of supplying data to said first bus, receiving data from said first bus, supplying data to said second bus, receiving data from said second bus, not capable of controlling data transfer on said first bus and capable of controlling data transfer on said second bus; and (col.4, line 42-col.5, line 34), fig.2

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- a second bus arbiter connected to each of said at least one second bus master device, said second bus and said bus bridge, said second bus arbiter granting control of data transfer on said first bus to one and only one of the set of devices including each second bus master and said bus bridge, said second bus arbiter granting control of data transfer to said dominant second bus master immediately upon request and interrupting any data transfer controlled by another second bus master. (col.5, lines 47-61)

As per claim 2, Smith discloses wherein: said at least one first bus master device consists of a central processing unit. (fig.1, 224)

As per claim 4, Smith discloses wherein: at least one first bus supplying/receiving device consists of a memory which is not capable of controlling data transfer. (col.6, lines 37-56)

As per claim 5, Smith discloses wherein: each second bus master generates a corresponding bus request signal to said second bus arbiter for second bus to request control of said second bus, said second bus arbiter having grant logic corresponding to each second bus master supplying a bus grant signal to said corresponding bus master upon bus grant, said bus request signal of said dominant bus master supplied to said grant logic corresponding to every other second bus masters for inhibiting generation of said grant request . (col.5, lines 47-61)

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As per claim 6, Smith discloses wherein: said bus arbiter grants control of said second bus to second bus master devices other than dominant bus master in a round robin fashion. (col.5, lines 35-61)

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US Patent 6,629,178) in view of Ghodrat et al. (US Patent 6,651,119)

Smith discloses all of the limitations as above except wherein at least one first bus master device consists of a direct memory access unit. However Ghodrat discloses processing data via direct memory access in transferring data between a bus and DMA. The phase of bus along with the status of DMA transactions are monitored. (col.2, lines 15-24)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Ghodrat's teaching into Smith's system so as to maximize the efficiency in processing data. (col.2, lines 15-24)

### CLAIMS OBJECTION

6. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM- 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.

Kim Huynh

Jan. 23, 2004



Khanh Dang  
Primary Examiner